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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/808,207	03/15/2001	Hima Furuta	108932	3277

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OLIFF & BERRIDGE, PLC
P.O. BOX 19928
ALEXANDRIA, VA 22320

EXAMINER

SHAAWAT, MUSSA

ART UNIT	PAPER NUMBER
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2128

DATE MAILED: 06/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/808,207

Applicant(s)

FURUTA ET AL.

Examiner

Mussa A Shaawat

Art Unit

2128

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 April 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-14 are pending.

Claim Interpretation

2. The examiner notes that upon further examinations of the claims the terms "having low feasibility" and "having superior geometric" is interpreted as having any feasibility or any geometric. See claim rejection below.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

3. The terms "having a low feasibility" and "having superior geometric" in claims 7-10 are relative terms, which render the claim indefinite. The terms "having a low feasibility" and "having superior geometric" are not defined by the claims, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The terminologies of claims 7-10 are indefinite.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-2, 4-5, 11-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Fay, Patent No. 5,983,201 (referred to hereafter as Fay).

As per claim 1, Fay teaches a three-dimensional beauty simulation client-server system comprising: a shop-based client that obtains and transmits three-dimensional shape data regarding a user, see **Fay** (col.5, lines 55-60, col. 6, lines 4-15); and a server that comprises a makeup simulation unit that receives and stores the three-dimensional shape data from the shop-based client and carries out makeup simulation based on the three-dimensional shape data in response to the users requests, and a data control unit that analyzes the users operation record and generates administrative information, see **Fay** (col.8, lines 5-19, col.9, lines 4-8, col.7, lines 45-50).

As per claim 2, Fay teaches a The three-dimensional beauty simulation client-server system according to claim 1, further comprising a client that can access the servers wherein the server provides a makeup simulation in response to requests from the client see **Fay** (col.6, lines 4-15, col.5, lines 55-60).

As per claim 4, Fay teaches a three-dimensional beauty simulation client-server system according to claim 1, wherein the server further comprises a member registration unit that stores member registration information, and wherein the server provides makeup simulations to users registered beforehand in the member registration unit, see **Fay** (col.5, lines 31-44, col.5, lines 8-12).

As per claim 5, Fay teaches a three-dimensional beauty simulation client-server system according to claim 1, wherein the server transmits the operation record and/or

administrative information regarding the users via a computer network, see **Fay** (col.6, lines 62-65, col.7, lines 3-5).

As per claim 11, claim 1 includes all the limitations of claim 11; therefore claim 11 is rejected under the same rational. Fay teaches the additional feature of claim 11, which is “a user information analyzer that receives the operation history of the user and analyzes the trends therein, and a control data base that stores the analyzed data”; see **Fay** (col.3, lines 59-67, col.4, lines 1-19).

As per claim 12, Fay teaches a three-dimensional beauty simulation server according to claim 11, wherein the makeup simulation providing unit analyzes the condition of the users facial skin and the light and dark areas that indicate the protrusions and indentations thereon, and evaluates the users facial expression based on the results of such analysis, see **Fay** (col.7, lines 45-57, col.8, lines 47-57).

As per claim 13, Fay teaches a three-dimensional beauty simulation server according to claim 11, wherein the makeup simulation providing unit obtains a facial image of the user, displays for the user a plurality of target facial images stored beforehand for allowing the user to select one of these images, combines the user facial image and the target facial image in a plurality of predetermined ratios, and supplies a plurality of combined facial images to the user, see **Fay** (col.5, 37-43, col.5, 55-65).

As per claim 14, Fay teaches a three-dimensional beauty simulation server according to claim 11, wherein the makeup simulation providing unit supplies facial images seen from freely chosen viewpoints, see **Fay** (col.8, lines 47-63).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fay, Patent No. 5,983,201 (referred to hereafter as Fay) in view of Tagawa Patent No. 5,732,398 (referred to hereafter as Tagawa).

As per claim 3, Fay teaches a shop-based client connected by a landline that obtains and transmits data to server and provide makeup simulation, see **Fay** (Col. 6, lines 65-67, col.7, lines 1-8).

Though Fay teaches a customer has the option of shopping for a pair of eyeglasses or makeup, from any location that happens to be convenient for the customer, not only from the customer's home without having to go to the store, see Fay (col.9, lines 1-12), Fay does not expressly teach a customer to use a wireless client.

Tagawa teaches a data transmission function via landline and wireless communication to connect to the server, see **Tagawa** (col.10, lines 10-16).

It would have been obvious for one of ordinary skill in the art at the time of the invention was made to connect to the server of Fay via wireless techniques of Tagawa in order to enhance portability. The customer does not need to visit a store location at all. If a customer has a wireless device, he can provide digital images and any

additional information that a store would need to process his order from any convenient location.

6. Claims 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fay, Patent No. 5,983,201 (referred to hereafter as Fay) in view of Gao et al., U.S. Patent No. 6,231,188 (referred to hereafter as Gao).

As per claim 6, Fay teaches a three-dimensional beauty simulation client-server system according to claim 1, wherein the shop-based client comprises: a plurality of cameras to obtain images of the user as seen from a plurality of viewpoints, see **Fay** (col.8, lines 5-10); a corresponding point search unit that receives each item of image data obtained from the plurality of cameras, analyzes the plurality of images, and searches for corresponding points that correspond to each other, see **Fay** (col.5, lines 10-23); a geometric calculation unit that sets a line of sight based on the recognition results from the three-dimensional shape recognition unit, and generates an image from a prescribed line of sight through geometric conversion of the data based on the set line of sight, see **Fay** (col.,5, lines 12-24, col.7, lines 9-15, col8., lines 40-45); a display unit that displays the image generated by the geometric calculation unit, see **Fay** (col.6, lines 4-17, col.8, lines 30-24)); and communication means that transmits the image data generated by the geometric calculation unit to the server, see **Fay** (col.8, lines 5-19, lines 43-45).

Though Fay teaches a three-dimensional camera, Fay does not expressly teach the details of the three-dimensional recognition unit.

Gao teaches a three-dimensional shape recognition unit that analyzes the searched corresponding points and recognizes the three dimensional shape of the targeted object, see Gao (col.8, lines 14-22, col.14, lines 7-25).

As per claim 8, Fay teaches a three-dimensional beauty simulation client-server system according to claim 6, wherein the corresponding point search unit and the geometric calculation unit comprises: a feature point extraction unit that extracts feature points from each of the plurality of images, see **Fay** (col.8, lines 47-54); a correlation calculating unit that seeks correlation among the feature points of the plurality of images and seeks combinations of the feature points, see **Fay** (col.7, lines 45-57); a matching unit that discards combinations having a low feasibility from among the combinations of feature points based on the condition that the images were seen from the plurality of viewpoints, see **Fay** (col.5, lines 60-67, col.7, lines 50-57, col.8, lines 47-63, col.7, lines 26-35); a camera orientations determining unit that seeks the positions of the plurality of viewpoints and the directions of the lines of sight, see **Fay** (col.7, lines 45-56, col.7, lines 16-23); a match propagation unit that, under the conditions imposed by the positions of the plurality of viewpoints and the direction of the lines of sight obtained by the camera orientations determining unit, selects combinations of feature points starting with those having superior geometric and statistical reliability and adjusts the analysis range of the images of the target object, see **Fay** (col.8, lines 40-46), a resampling unit that normalizes the matching map obtained by the match propagation unit, see **Fay** (col.8, lines 47-54), and a three-dimensional position measurement unit that determines the position of a target object

in a three-dimensional space based on the normalized matching map, see **Fay** (col.8, lines 5-19, col.5, lines 10-24).

Fay does not explicitly teach a view interpolation unit.

However, Gao teaches a view interpolation unit that generates images seen from viewpoints different from the plurality of viewpoints based on the determined three-dimensional position of the target object teaches, see **Gao** (col.8, lines 24-30).

As per claims 6, and 8, it would have been obvious to one of ordinary skill in the art at the time of the applicant's invention was made to incorporate a method of providing a user with a simulation of one's face and combine it with a view interpolation unit and a three dimensional shape recognition unit of Gao in order to create a three-dimensional beauty simulation system of Fay to present a more realistic view of one's face when for example, buying eyeglasses or makeup to see if the product is right for them.

Claims 7, 9 and 10, contain the same limitations as recited in claim 8, therefore are rejected based upon the same rationale, *supra*.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Rigg (US 6,293,284) Virtual Makeover, a method for providing a virtual color makeover of a customer's face and skin.

- Spackova et al. (4,539,585) Previewer, provides dynamic viewing of various combinations such as: make-up, cosmetic surgical changes, clothing, furnishings, and automobile accessories.
- Borrel et al. (US 6,377, 257) Methods and Apparatus for Delivering 3D Graphics In a Networked Environment.
- Eraslan (US 6,381,346) Three-Dimensional Face Identification System.
- Bornstein (6,144,388) Process for Displaying Articles of Clothing on an Image of a Person.
- Steir et al. (5,060,171) A System and Method for Superimposing Images.
- Beavin (5,495,568) Computerized Clothing Designer.
- Korszum (5,680,528) Digital Dressing Room.
- Christian et al. (6,043,827) Technique for Acknowledging Multiple Objects Using A Computer Generated Face.V. Haney (3,510,210) Computer Process Character Animation.
- Yoda (5,515,268) Method of and System for Ordering Products.
- Blancato (4731,743) A method and apparatus for displaying hairstyle.
- V. Haney (3,510,210) Computer Process Animation.
- Gao et al. (6,095,650) Interactive Eyewear Selection System.

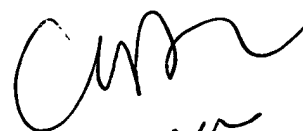
Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mussa A Shaawat whose telephone number is (703) 605-1372. The examiner can normally be reached on Monday-Friday(8:30am to 5:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin J Teska can be reached on (703) 305-9704. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mussa Shaawat
Patent Examiner
June 04, 2004


W. Hansen
AM. 2123
Primary Examiner

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